

DEPARTMENT OF TRANSPORTATION
ADMINISTRATIVE SERVICES DIVISION
1401 EAST BROAD STREET
RICHMOND, VA 23219

NOTICE OF CONTRACT AWARD

1. DATE.....July 5, 2005
2. COMMODITY NAME.....Snow Plows
3. CONTRACT NUMBER.....**VAPP 23753**
4. CONTRACT PERIOD.....July 5, 2005 through July 4, 2006
(With 2 one-year renewals possible)
5. AUTHORIZED USERS.....State Agencies and Other Public Bodies
6. CONTRACTORS FIN NUMBER.....23-1399803
7. CONTRACTOR.....Valk Manufacturing Co.
P. O. Box 428
New Kingstown, PA 17072
8. CONTRACTOR CONTACT PERSON.....Dan Cribari
9. CONTRACTOR'S PHONE NUMBER.....(717) 766-0711
FAX NUMBER (717) 697-6297
10. PRICES AND OPTIONSSee attached
11. DELIVERY.....120 Days
12. FOR FURTHER CONTRACT INFORMATION CONTRACT:.....Caroline Hudgins
(804) 786-2725
13. FOR ADDITIONAL COPIES OF THIS AND OTHER CONTRACTS AND ANY
ASSOCIATE CONTRACT CHANGES, CALL (804)-786-2725.

INSTRUCTIONS

1. Orders: Unless otherwise instructed by the Department of Transportation, institutions and agencies of the Commonwealth of Virginia may order items listed by issuing agency purchase orders (Form DPS-41-056) or by issuing their own purchase order form. Please forward copy of order to VDOT. – FAX – 804-225-4292 – ATTN: Caroline Hudgins
2. Virginia cities, counties, towns and political subdivisions may use their own form to order items listed in this contract
3. The applicable contract number, federal employer identification number (FIN) and item number (for itemized contracts) must be shown on each purchase order and copy.
4. Inspection on delivery or equipment and approval of vendor's invoice is the responsibility of receiving State Agency, Virginia City, county, town or political subdivision.
5. Any complaint as to quality faulty or delinquent delivery, or violation of contract provisions by contractor shall be reported to the Department of Transportation for handling with the contractor. Preprinted forms (DGS-41-024), by which to facilitate the notification of the contractor and this office of complaints, are available from the Division of Purchases and Supply (786 -3522)
6. SPECIFICATIONS: See Attached

SNOW PLOWS

	Price
10 FT., TWO-WAY MANUAL REVERSING VALK RV101-75	\$1,781.00
11 FT. TWO-WAY MANUAL REVERSING VALK RV111-75	\$1,844.00
12 FT. TWO-WAY MANUAL REVERSING VALK RV122-75	\$1,991.00
JRB COUPLER OPTION ONLY APPLIES TO 1 ST 3 LINE ITEMS	\$800.00
10 FT. ONE-WAY W/TAPERED MOLDBOARD, VALK V510-84	\$2,722.00
11 FT. ONE-WAY W/TAPERED MOLDBOARD, VALK V511-84	\$2,799.00
12 FT. ONE-WAY W/TAPERED MOLDBOARD, VALK V512-84	\$2,874.00
11 FT. POWER REVERSING W/DUAL TAPERED MOLDBOARDS, VALK XW- 11PR	\$3,837.00
12 FT. POWER REVERSING W/DUAL TAPERED MOLDBOARDS, VALK XW- 12PR	\$3,952.00
11 FT. DUAL TAPERED MOLDBOARD, MANUAL REVERSING, VALK XW-11	\$3,254.00
12 FT. DUAL TAPERED MOLDBOARD, MANUAL REVERSING, VALK XW-12	\$3,459.00



VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

10' Two-Way Snowplow

General: Snowplow for a 30,000 lb. GVW truck to be two-way reversible type, 10' in length, 30" in height with variation not to exceed 2" and weigh not less than 1,040 lbs.

The plow is to be constructed for high speed operations, reversible frame, adjustable to five positions: 0 degrees (straight), 35 degrees and 42 degrees right and left. Plow to have sufficient vertical play on ends of plow to fit shape of pavement. For convenience of operator, positioning mechanism for angular adjustment, including latch retainer, to be designed to operate from top side.

Optional Item: These specifications contain an option for purchase at the time units are ordered. Bidder shall quote the additional cost for the option as applicable to the base specification of the snowplow. A price is required for the option. Bidder must provide the same make and model snowplow as bid in the base specification except for changes necessary to comply with the option.

Moldboard: Moldboard to have cutting edge not less than 10' in length with standard punching. Moldboard overall height, including blade, to be approximately 30" with variation not to exceed 2". To be constructed of not less than 10 gauge steel. Moldboard to have not less than six vertical ribs across midsection, each 1/2" x 3" minimum, or equal. Moldboard ends are to be reinforced with similar ribs or flanges. Horizontal ribs are also to be included according to manufacturer's standard for plow size and type. Bottom member used as blade support to be 3" x 4" x 5/8" angle, minimum, or equal, with necessary gussets to support and reinforce moldboard and cutting edge.

The upper portion of the moldboard is to project over the cutting edge to form a continuous solid integral snow shield with upper reinforcement not less than 2-1/2" x 2-1/2" x 3/8" or 3" x 2" x 3/8" angle.

Blade: Plow to be equipped with sectional carbide tipped blades conforming to the attached specifications. Carbide blades are to be mounted to moldboard behind a one piece regular blade; thereby, providing double thickness blades. Blades to be punched with standard punching.

Automatic Moldboard Release: The moldboard is to release on shock and automatically spring back in place by use of enclosed springs. Springs to be adjustable in order to be able to regulate the trip.

Trip cylinder attachment to moldboard is to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Plow Frame: Plow frame to be heavy duty with side members of frame not less than ½" x 3" x 3" angle, box frame or channel of equal strength. Frame to be adequately braced. Shackles for attachment to push frame to have center to center measurement of 21" with 1-5/16" diameter holes for pins. Hole/pin position to be not less than 36" from plow frame pivot point. Radius angle to be fabricated of not less than 3" x 3" x ½" angle, attached to at least three points to a front angle of not less than 3" x 4" x ½" or 3-1/2" x 3-1/2" x ½" angle. Minimum hinge point centers to be 75". The hinge pins are to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Lift Chain: The lift chain to be of adequate length, not less than 3/8" size. Chain to be attached to plow at each end with a chain shackle. Chain shackle is to be either loose pin type with cotter pin or bolt pin type with cotter pin securing the nut. Screw pin type is not acceptable. Cold shuts will not be acceptable. Chain to include spring links for shock absorbing.

Moldboard Deflector: A piece of 9/32" thick x 12" wide x moldboard length, two-ply, rubberized, smooth face conveyor belting is to be furnished as a moldboard deflector. The top edge of the moldboard is to be drilled with ¼" holes at each end and on 12" centers the full length for attachment. Corrosion resistant ¼" bolts and large O.D. (fender) washers are to fasten belting to moldboard. **NOTE: BELTING AND BOLTS MAY BE SHIPPED SEPARATE FOR INSTALLATION BY VDOT PERSONNEL; HOWEVER, BOLTS MUST BE INDIVIDUALLY PACKAGED IN QUANTITIES CORRECT FOR EACH SNOWPLOW, AND BOTH BOLTS AND BELT ARE TO BE MARKED FOR THE SNOWPLOW SIZE.**

Jack: Plow is to have a screw type storage jack mounted centrally to shackles. It is to be capable of adjusting shackle height to match hitch height but not interfere with hookup. To have a base plate adequate for support. Jack is to be mounted to plow frame with a telescoping pipe and hitch pin arrangement so that it can be removed after plow is hitched to truck.

Push Frame: No "A" frame or hydraulic lift to be furnished.

This plow is to work with standard "A" frame and hydraulic lift device now owned by the Virginia Department of Transportation.

Skids/Casters: No supporting device is to be furnished, such as the skid shoes with swivel adjustments or skid supports.

Workmanship: All workmanship shall be in accordance with good commercial practices. All cutting, drilling and machining are to be finished so that edges are smooth. Hand cutting by

torch is unacceptable. Welds shall be ground and sanded to insure satisfactory appearance of the completed unit.

Paint: Manufacturer's standard color is acceptable provided it is a shade of yellow or orange associated with construction equipment. Contact the Asset Management Division, Equipment Section office at (804) 236-3589 for approval.

If manufacturer's standard color is not acceptable the unit is to be painted one coat of rust inhibitive paint prior to being painted a finished coat of lead free Virginia Highway Orange Color, Du Pont Color #LF74279AT, or equivalent.

Advertisement: No stickers, decals or plates displaying dealer or distributor name or logo shall be affixed to equipment. Manufacturer's plate with model and serial number is to be on the equipment.

Warranty: Supplier is to provide a statement of manufacturer's standard warranty of all items supplied. A minimum of 12 months from in-service date shall be provided.

Delivery: Equipment is to be delivered to the District Headquarters location listed in the Request for Quote (RFQ). Unit is to be fully assembled (except where noted in these specifications) and ready to operate before being accepted by the Department.

Current Model: To be standard proven model of manufacturer's latest current production with additional features outlined herein. Unit is not to be materially modified or augmented.

Bid Literature: Descriptive literature, including verification of unit weight, will be required to substantiate the details specified in bid. Detailed drawings showing all dimensions shall be furnished with bid.

Manuals and Parts Lists: Successful bidder shall furnish two sets of manual of instructions and two sets of microfiche, CD-ROM or printed parts lists with each unit. Microfiche parts lists to be 4" x 6" cards, positive or negative, 24X or 42X magnification.

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OPTION: Supply plow frame equipped with the mating half of a JRB quick coupler system as manufactured by JRB Company, Inc., Akron Ohio. For reference, quick couplers are used on nominal 2 cubic yard front end loaders similar to John Deere 544E & 544G, Case 621C, Komatsu WA180-1, and Volvo L60E.



VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

11' Two-Way Snowplow

General: Snowplow for a 30,000 lb. GVW truck to be two-way reversible type, 11' in length, 30" in height with variation not to exceed 2" and weigh not less than 1,200 lbs.

The plow is to be constructed for high speed operations, reversible frame, adjustable to five positions: 0 degrees (straight), 35 degrees and 42 degrees right and left. Plow to have sufficient vertical play on ends of plow to fit shape of pavement. For convenience of operator, positioning mechanism for angular adjustment, including latch retainer, to be designed to operate from top side.

Optional Item: These specifications contain an option for purchase at the time units are ordered. Bidder shall quote the additional cost for the option as applicable to the base specification of the snowplow. A price is required for the option. Bidder must provide the same make and model snowplow as bid in the base specification except for changes necessary to comply with the option.

Moldboard: Moldboard to have cutting edge not less than 11' in length with standard punching. Moldboard overall height, including blade, to be approximately 30" with variation not to exceed 2". To be constructed of not less than 10 gauge steel. Moldboard to have not less than six vertical ribs across midsection, each 1/2" x 3" minimum, or equal. Moldboard ends are to be reinforced with similar ribs or flanges. Horizontal ribs are also to be included according to manufacturer's standard for plow size and type. Bottom member used as blade support to be 3" x 4" x 5/8" angle, minimum, or equal, with necessary gussets to support and reinforce moldboard and cutting edge.

The upper portion of the moldboard is to project over the cutting edge to form a continuous solid integral snow shield with upper reinforcement not less than 2-1/2" x 2-1/2" x 3/8" or 3" x 2" x 3/8" angle.

Blade: Plow to be equipped with sectional carbide tipped blades conforming to the attached specifications. Carbide blades are to be mounted to moldboard behind a one piece regular blade; thereby, providing double thickness blades. Blades to be punched with standard punching.

Automatic Moldboard Release: The moldboard is to release on shock and automatically spring back in place by use of enclosed springs. Springs to be adjustable in order to be able to regulate the trip.

Trip cylinder attachment to moldboard is to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Plow Frame: Plow frame to be heavy duty with side members of frame not less than ½" x 3" x 3" angle, box frame or channel of equal strength. Frame to be adequately braced. Shackles for attachment to push frame to have center to center measurement of 21" with 1-5/16" diameter holes for pins. Hole/pin position to be not less than 36" from plow frame pivot point. Radius angle to be fabricated of not less than 3" x 3" x ½" angle, attached to at least three points to a front angle of not less than 3" x 4" x ½" or 3-1/2" x 3-1/2" x ½" angle. Minimum hinge point centers to be 75". The hinge pins are to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Lift Chain: The lift chain to be of adequate length, not less than 3/8" size. Chain to be attached to plow at each end with a chain shackle. Chain shackle is to be either loose pin type with cotter pin or bolt pin type with cotter pin securing the nut. Screw pin type is not acceptable. Cold shuts will not be acceptable. Chain to include spring links for shock absorbing.

Moldboard Deflector: A piece of 9/32" thick x 12" wide x moldboard length, two-ply, rubberized, smooth face conveyor belting is to be furnished as a moldboard deflector. The top edge of the moldboard is to be drilled with ¼" holes at each end and on 12" centers the full length for attachment. Corrosion resistant ¼" bolts and large O.D. (fender) washers are to fasten belting to moldboard. **NOTE: BELTING AND BOLTS MAY BE SHIPPED SEPARATE FOR INSTALLATION BY VDOT PERSONNEL; HOWEVER, BOLTS MUST BE INDIVIDUALLY PACKAGED IN QUANTITIES CORRECT FOR EACH SNOWPLOW, AND BOTH BOLTS AND BELT ARE TO BE MARKED FOR THE SNOWPLOW SIZE.**

Jack: Plow is to have a screw type storage jack mounted centrally to shackles. It is to be capable of adjusting shackle height to match hitch height but not interfere with hookup. To have a base plate adequate for support. Jack is to be mounted to plow frame with a telescoping pipe and hitch pin arrangement so that it can be removed after plow is hitched to truck.

Push Frame: No "A" frame or hydraulic lift to be furnished.

This plow is to work with standard "A" frame and hydraulic lift device now owned by the Virginia Department of Transportation.

Skids/Casters: No supporting device is to be furnished, such as the skid shoes with swivel adjustments or skid supports.

Workmanship: All workmanship shall be in accordance with good commercial practices. All cutting, drilling and machining are to be finished so that edges are smooth. Hand cutting by

torch is unacceptable. Welds shall be ground and sanded to insure satisfactory appearance of the completed unit.

Paint: Manufacturer's standard color is acceptable provided it is a shade of yellow or orange associated with construction equipment. Contact the Asset Management Division, Equipment Section office at (804) 236-3589 for approval.

If manufacturer's standard color is not acceptable the unit is to be painted one coat of rust inhibitive paint prior to being painted a finished coat of lead free Virginia Highway Orange Color, Du Pont Color #LF74279AT, or equivalent.

Advertisement: No stickers, decals or plates displaying dealer or distributor name or logo shall be affixed to equipment. Manufacturer's plate with model and serial number is to be on the equipment.

Warranty: Supplier is to provide a statement of manufacturer's standard warranty of all items supplied. A minimum of 12 months from in-service date shall be provided.

Delivery: Equipment is to be delivered to the District Headquarters location listed in the Request for Quote (RFQ). Unit is to be fully assembled (except where noted in these specifications) and ready to operate before being accepted by the Department.

Current Model: To be standard proven model of manufacturer's latest current production with additional features outlined herein. Unit is not to be materially modified or augmented.

Bid Literature: Descriptive literature, including verification of unit weight, will be required to substantiate the details specified in bid. Detailed drawings showing all dimensions shall be furnished with bid.

Manuals and Parts Lists: Successful bidder shall furnish two sets of manual of instructions and two sets of microfiche, CD-ROM or printed parts lists with each unit. Microfiche parts lists to be 4" x 6" cards, positive or negative, 24X or 42X magnification.

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OPTION: Supply plow frame equipped with the mating half of a JRB quick coupler system as manufactured by JRB Company, Inc., Akron Ohio. For reference, quick couplers are used on nominal 2 cubic yard front end loaders similar to John Deere 544E & 544G, Case 621C, Komatsu WA180-1, and Volvo L60E.



VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

12' Two-Way Snowplow

General: Snowplow for a 30,000 to 37,000 lb. GVW truck to be two-way reversible type, 12' in length, 36" in height with variation not to exceed 2".

The plow is to be constructed for high speed operations, reversible frame, adjustable to five positions: 0 degrees (straight), 35 degrees and 42 degrees right and left. Plow to have sufficient vertical play on ends of plow to fit shape of pavement. For convenience of operator, positioning mechanism for angular adjustment, including latch retainer, to be designed to operate from top side.

Optional Item: These specifications contain an option for purchase at the time units are ordered. Bidder shall quote the additional cost for the option as applicable to the base specification of the snowplow. A price is required for the option. Bidder must provide the same make and model snowplow as bid in the base specification except for changes necessary to comply with the option.

Moldboard: Moldboard to have cutting edge not less than 12' in length with standard punching. Moldboard overall height, including blade, to be approximately 36" with variation not to exceed 2". To be constructed of not less than 3/16" steel. Moldboard to have not less than six vertical ribs across midsection, each 1/2" x 3" minimum, or equal. Moldboard ends are to be reinforced with similar ribs or flanges. Horizontal ribs are also to be included according to manufacturer's standard for plow size and type. Bottom member used as blade support to be 3" x 4" x 5/8" angle, minimum, or equal, with necessary gussets to support and reinforce moldboard and cutting edge.

The upper portion of the moldboard is to project over the cutting edge to form a continuous solid integral snow shield with upper reinforcement not less than 2-1/2" x 2-1/2" x 3/8" or 3" x 2" x 3/8" angle.

Blade: Plow to be equipped with sectional carbide tipped blades conforming to the attached specifications. Carbide blades are to be mounted to moldboard behind a one piece regular blade; thereby, providing double thickness blades. Blades to be punched with standard punching.

Automatic Moldboard Release: The moldboard is to release on shock and automatically spring back in place by use of enclosed springs. Springs to be adjustable in order to be able to regulate the trip.

Trip cylinder attachment to moldboard is to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Plow Frame: Plow frame to be heavy duty with side members of frame not less than ½" x 3" x 3" angle, box frame or channel of equal strength. Frame to be adequately braced. Shackles for attachment to push frame to have center to center measurement of 21" with 1-5/16" diameter holes for pins. Hole/pin position to be not less than 36" from plow frame pivot point. Radius angle to be fabricated of not less than 3" x 3" x ½" angle, attached to at least three points to a front angle of not less than 3" x 4" x ½" or 3-1/2" x 3-1/2" x ½" angle. Minimum hinge point centers to be 75". The hinge pins are to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Lift Chain: The lift chain to be of adequate length, not less than 3/8" size. Chain to be attached to plow at each end with a chain shackle. Chain shackle is to be either loose pin type with cotter pin or bolt pin type with cotter pin securing the nut. Screw pin type is not acceptable. Cold shuts will not be acceptable. Chain to include spring links for shock absorbing.

Moldboard Deflector: A piece of 9/32" thick x 12" wide x moldboard length, two-ply, rubberized, smooth face conveyor belting is to be furnished as a moldboard deflector. The top edge of the moldboard is to be drilled with ¼" holes at each end and on 12" centers the full length for attachment. Corrosion resistant ¼" bolts and large O.D. (fender) washers are to fasten belting to moldboard. **NOTE: BELTING AND BOLTS MAY BE SHIPPED SEPARATE FOR INSTALLATION BY VDOT PERSONNEL; HOWEVER, BOLTS MUST BE INDIVIDUALLY PACKAGED IN QUANTITIES CORRECT FOR EACH SNOWPLOW, AND BOTH BOLTS AND BELT ARE TO BE MARKED FOR THE SNOWPLOW SIZE.**

Jack: Plow is to have a screw type storage jack mounted centrally to shackles. It is to be capable of adjusting shackle height to match hitch height but not interfere with hookup. To have a base plate adequate for support. Jack is to be mounted to plow frame with a telescoping pipe and hitch pin arrangement so that it can be removed after plow is hitched to truck.

Push Frame: No "A" frame or hydraulic lift to be furnished.

This plow is to work with standard "A" frame and hydraulic lift device now owned by the Virginia Department of Transportation.

Skids/Casters: No supporting device is to be furnished, such as the skid shoes with swivel adjustments or skid supports.

Workmanship: All workmanship shall be in accordance with good commercial practices. All cutting, drilling and machining are to be finished so that edges are smooth. Hand cutting by

torch is unacceptable. Welds shall be ground and sanded to insure satisfactory appearance of the completed unit.

Paint: Manufacturer's standard color is acceptable provided it is a shade of yellow or orange associated with construction equipment. Contact the Asset Management Division, Equipment Section office at (804) 236-3589 for approval.

If manufacturer's standard color is not acceptable the unit is to be painted one coat of rust inhibitive paint prior to being painted a finished coat of lead free Virginia Highway Orange Color, Du Pont Color #LF74279AT, or equivalent.

Advertisement: No stickers, decals or plates displaying dealer or distributor name or logo shall be affixed to equipment. Manufacturer's plate with model and serial number is to be on the equipment.

Warranty: Supplier is to provide a statement of manufacturer's standard warranty of all items supplied. A minimum of 12 months from in-service date shall be provided.

Delivery: Equipment is to be delivered to the District Headquarters location listed in the Request for Quote (RFQ). Unit is to be fully assembled (except where noted in these specifications) and ready to operate before being accepted by the Department.

Current Model: To be standard proven model of manufacturer's latest current production with additional features outlined herein. Unit is not to be materially modified or augmented.

Bid Literature: Descriptive literature, including verification of unit weight, will be required to substantiate the details specified in bid. Detailed drawings showing all dimensions shall be furnished with bid.

Manuals and Parts Lists: Successful bidder shall furnish two sets of manual of instructions and two sets of microfiche, CD-ROM or printed parts lists with each unit. Microfiche parts lists to be 4" x 6" cards, positive or negative, 24X or 42X magnification.

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OPTION: Supply plow frame equipped with the mating half of a JRB quick coupler system as manufactured by JRB Company, Inc., Akron Ohio. For reference, quick couplers are used on nominal 2 cubic yard front end loaders similar to John Deere 544E & 544G, Case 621C, Komatsu WA180-1, and Volvo L60E.



VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

10' One-Way Snowplow with Tapered Moldboard

General: Snowplow to be for a 30,000 to 37,000 lb. GVW truck, constructed for high speed operation, adjustable to a position of 35 degrees to 38 degrees. Weight to be not less than 1,1250 lbs.

Moldboard: Moldboard to be curved and tapered having overall width not less than 11' 3" with cutting edge not less than 10' 3" plus end section. Moldboard, including the blade, to be not less than 26" tall at the low end and not less than 46" tall at the high end. To be constructed of not less than 10 gauge steel, vertically braced with not less than five vertical ribs; also, to be braced horizontally not less than two places. Moldboard to be punched with standard punching.

Blade: Plow to be equipped with sectional carbide tipped blades conforming to the attached specifications. Carbide blades are to be mounted to moldboard behind a one piece regular blade; thereby, providing double thickness blades. Blades to be punched with standard punching.

Automatic Moldboard Release: The moldboard is to release on shock and automatically spring back in place by use of enclosed springs. Springs to be adjustable in order to be able to regulate the trip.

Trip cylinder attachment to moldboard is to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Plow Frame: Plow frame to be heavy duty with side members of frame not less than ½" x 3" x 3" angle, box frame or channel of equal strength. Frame to be adequately braced. Shackles for attachment to push frame to have center to center measurement of 21" with 1-5/16" diameter holes for pins. Hole/pin position to be not less than 36" from plow frame pivot point. Radius angle to be fabricated of not less than 3" x 3" x ½" angle, attached to at least three points to a front angle of not less than 3" x 4" x ½" or 3-1/2" x 3-1/2" x ½" angle. Minimum hinge point centers to be 80". The hinge pins are to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Lift Chain: The lift chain to be of adequate length, not less than 3/8" size. Chain to be attached to plow at each end with a chain shackle. Chain shackle is to be either loose pin type with cotter pin or bolt pin type with cotter pin securing the nut. Screw pin type is not acceptable. Cold shuts will not be acceptable. Chain to include spring links for shock absorbing.

10' One-Way Snowplow with Tapered Moldboard

Moldboard Deflector: A piece of 9/32" thick x 12" wide x moldboard length, two-ply, rubberized, smooth face conveyor belting is to be furnished as a moldboard deflector. The top edge of the moldboard is to be drilled with 1/4" holes at each end and on 12" centers the full length for attachment. Corrosion resistant 1/4" bolts and large O.D. (fender) washers are to fasten belting to moldboard. **NOTE: BELTING AND BOLTS MAY BE SHIPPED SEPARATE FOR INSTALLATION BY VDOT PERSONNEL; HOWEVER, BOLTS MUST BE INDIVIDUALLY PACKAGED IN QUANTITIES CORRECT FOR EACH SNOWPLOW, AND BOTH BOLTS AND BELT ARE TO BE MARKED FOR THE SNOWPLOW SIZE.**

Jack: Plow is to have a screw type storage jack mounted centrally to shackles. It is to be capable of adjusting shackle height to match hitch height but not interfere with hookup. To have a base plate adequate for support. Jack is to be mounted to plow frame with a telescoping pipe and hitch pin arrangement so that it can be removed after plow is hitched to truck.

Push Frame: No "A" frame or hydraulic lift to be furnished.

This plow is to work with standard "A" frame and hydraulic lift device now owned by the Virginia Department of Transportation.

Skids/Casters: No supporting device is to be furnished, such as the skid shoes with swivel adjustments or skid supports.

Workmanship: All workmanship shall be in accordance with good commercial practices. All cutting, drilling and machining are to be finished so that edges are smooth. Hand cutting by torch is unacceptable. Welds shall be ground and sanded to insure satisfactory appearance of the completed unit.

Paint: Manufacturer's standard color is acceptable provided it is a shade of yellow or orange associated with construction equipment. Contact the Asset Management Division, Equipment Section office at (804) 236-3589 for approval.

If manufacturer's standard color is not acceptable the unit is to be painted one coat of rust inhibitive paint prior to being painted a finished coat of lead free Virginia Highway Orange Color, Du Pont Color #LF74279AT, or equivalent.

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Bid Literature: Descriptive literature, including verification of unit weight, will be required to substantiate the details specified in bid. Detailed drawings showing all dimensions shall be furnished with bid.

Manuals and Parts Lists: Successful bidder shall furnish two sets of manual of instructions and two sets of microfiche, CD-ROM or printed parts lists with each unit. Microfiche parts lists to be 4" x 6" cards, positive or negative, 24X or 42X magnification.



VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

11' One-Way Snowplow with Tapered Moldboard

General: Snowplow to be for a 30,000 to 37,000 lb. GVW truck, constructed for high speed operation, adjustable to a position of 35 degrees to 38 degrees. Weight to be not less than 1,390 lbs.

Moldboard: Moldboard to be curved and tapered having overall width not less than 11' 10" with cutting edge not less than 10' 11" plus end section. Moldboard, including the blade, to be not less than 26" tall at the low end and not less than 46" tall at the high end. To be constructed of not less than 10 gauge steel, vertically braced with not less than five vertical ribs; also, to be braced horizontally not less than two places. Moldboard to be punched with standard punching.

Blade: Plow to be equipped with sectional carbide tipped blades conforming to the attached specifications. Carbide blades are to be mounted to moldboard behind a one piece regular blade; thereby, providing double thickness blades. Blades to be punched with standard punching.

Automatic Moldboard Release: The moldboard is to release on shock and automatically spring back in place by use of enclosed springs. Springs to be adjustable in order to be able to regulate the trip.

Trip cylinder attachment to moldboard is to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Plow Frame: Plow frame to be heavy duty with side members of frame not less than ½" x 3" x 3" angle, box frame or channel of equal strength. Frame to be adequately braced. Shackles for attachment to push frame to have center to center measurement of 21" with 1-5/16" diameter holes for pins. Hole/pin position to be not less than 36" from plow frame pivot point. Radius angle to be fabricated of not less than 3" x 3" x ½" angle, attached to at least three points to a front angle of not less than 3" x 4" x ½" or 3-1/2" x 3-1/2" x ½" angle. Minimum hinge point centers to be 80". The hinge pins are to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Lift Chain: The lift chain to be of adequate length, not less than 3/8" size. Chain to be attached to plow at each end with a chain shackle. Chain shackle is to be either loose pin type with cotter pin or bolt pin type with cotter pin securing the nut. Screw pin type is not acceptable. Cold shuts will not be acceptable. Chain to include spring links for shock absorbing.

11' One-Way Snowplow with Tapered Moldboard

Moldboard Deflector: A piece of 9/32" thick x 12" wide x moldboard length, two-ply, rubberized, smooth face conveyor belting is to be furnished as a moldboard deflector. The top edge of the moldboard is to be drilled with 1/4" holes at each end and on 12" centers the full length for attachment. Corrosion resistant 1/4" bolts and large O.D. (fender) washers are to fasten belting to moldboard. **NOTE: BELTING AND BOLTS MAY BE SHIPPED SEPARATE FOR INSTALLATION BY VDOT PERSONNEL; HOWEVER, BOLTS MUST BE INDIVIDUALLY PACKAGED IN QUANTITIES CORRECT FOR EACH SNOWPLOW, AND BOTH BOLTS AND BELT ARE TO BE MARKED FOR THE SNOWPLOW SIZE.**

Jack: Plow is to have a screw type storage jack mounted centrally to shackles. It is to be capable of adjusting shackle height to match hitch height but not interfere with hookup. To have a base plate adequate for support. Jack is to be mounted to plow frame with a telescoping pipe and hitch pin arrangement so that it can be removed after plow is hitched to truck.

Push Frame: No "A" frame or hydraulic lift to be furnished.

This plow is to work with standard "A" frame and hydraulic lift device now owned by the Virginia Department of Transportation.

Skids/Casters: No supporting device is to be furnished, such as the skid shoes with swivel adjustments or skid supports.

Workmanship: All workmanship shall be in accordance with good commercial practices. All cutting, drilling and machining are to be finished so that edges are smooth. Hand cutting by torch is unacceptable. Welds shall be ground and sanded to insure satisfactory appearance of the completed unit.

Paint: Manufacturer's standard color is acceptable provided it is a shade of yellow or orange associated with construction equipment. Contact the Asset Management Division, Equipment Section office at (804) 236-3589 for approval.

If manufacturer's standard color is not acceptable the unit is to be painted one coat of rust inhibitive paint prior to being painted a finished coat of lead free Virginia Highway Orange Color, Du Pont Color #LF74279AT, or equivalent.

Advertisement: No stickers, decals or plates displaying dealer or distributor name or logo shall be affixed to equipment. Manufacturer's plate with model and serial number is to be on the equipment.

Warranty: Supplier is to provide a statement of manufacturer's standard warranty of all items supplied. A minimum of 12 months from in-service date shall be provided.

11' One-Way Snowplow with Tapered Moldboard

Delivery: Equipment is to be delivered to the District Headquarters location listed in the Request for Quote (RFQ). Unit is to be fully assembled (except where noted in these specifications) and ready to operate before being accepted by the Department.

Current Model: To be standard proven model of manufacturer's latest current production with additional features outlined herein. Unit is not to be materially modified or augmented.

Bid Literature: Descriptive literature, including verification of unit weight, will be required to substantiate the details specified in bid. Detailed drawings showing all dimensions shall be furnished with bid.

Manuals and Parts Lists: Successful bidder shall furnish two sets of manual of instructions and two sets of microfiche, CD-ROM or printed parts lists with each unit. Microfiche parts lists to be 4" x 6" cards, positive or negative, 24X or 42X magnification.



VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

12' One-Way Snowplow with Tapered Moldboard

General: Snowplow to be for a 37,000 lb. GVW truck, constructed for high speed operation, adjustable to a position of 35 degrees to 38 degrees. Weight to be approximately 1,880 lbs.

Moldboard: Moldboard to be curved and tapered having overall width not less than 12' 2" with cutting edge not less than 11' 7" plus end section. Moldboard, including the blade to be not less than 32" tall at the low end and not less than 53" tall at the high end. To be constructed of not less than 10 gauge steel, vertically braced with not less than eight vertical ribs; also, to be braced horizontally not less than two places. Moldboard to be punched with standard punching.

Blade: Plow to be equipped with sectional carbide tipped blades conforming to the attached specifications. Carbide blades are to be mounted to moldboard behind a one piece regular blade; thereby, providing double thickness blades. Blades to be punched with standard punching.

Automatic Moldboard Release: The moldboard is to release on shock and automatically spring back in place by use of enclosed springs. Springs to be adjustable in order to be able to regulate the trip.

Trip cylinder attachment to moldboard is to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Plow Frame: Plow frame to be heavy duty with side members of frame not less than ½" x 3" x 3" angle, box frame or channel of equal strength. Frame to be adequately braced. Shackles for attachment to push frame to have center to center measurement of 21" with 1-5/16" diameter holes for pins. Hole/pin position to be not less than 36" from plow frame pivot point. Radius angle to be fabricated of not less than 3" x 3" x ½" angle, attached to at least three points to a front angle of not less than 3" x 4" x ½" or 3-1/2" x 3-1/2" x ½" angle. Minimum hinge point centers to be 83". The hinge pins are to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Lift Chain: The lift chain to be of adequate length, not less than 3/8" size. Chain to be attached to plow at each end with a chain shackle. Chain shackle is to be either loose pin type with cotter pin or bolt pin type with cotter pin securing the nut. Screw pin type is not acceptable. Cold shuts will not be acceptable. Chain to include spring links for shock absorbing.

12' One-Way Snowplow with Tapered Moldboard

Moldboard Deflector: A piece of 9/32" thick x 12" wide x moldboard length, two-ply, rubberized, smooth face conveyor belting is to be furnished as a moldboard deflector. The top edge of the moldboard is to be drilled with 1/4" holes at each end and on 12" centers the full length for attachment. Corrosion resistant 1/4" bolts and large O.D. (fender) washers are to fasten belting to moldboard. **NOTE: BELTING AND BOLTS MAY BE SHIPPED SEPARATE FOR INSTALLATION BY VDOT PERSONNEL; HOWEVER, BOLTS MUST BE INDIVIDUALLY PACKAGED IN QUANTITIES CORRECT FOR EACH SNOWPLOW, AND BOTH BOLTS AND BELT ARE TO BE MARKED FOR THE SNOWPLOW SIZE.**

Jack: Plow is to have a screw type storage jack mounted centrally to shackles. It is to be capable of adjusting shackle height to match hitch height but not interfere with hookup. To have a base plate adequate for support. Jack is to be mounted to plow frame with a telescoping pipe and hitch pin arrangement so that it can be removed after plow is hitched to truck.

Push Frame: No "A" frame or hydraulic lift to be furnished.

This plow is to work with standard "A" frame and hydraulic lift device now owned by the Virginia Department of Transportation.

Skids/Casters: No supporting device is to be furnished, such as the skid shoes with swivel adjustments or skid supports.

Workmanship: All workmanship shall be in accordance with good commercial practices. All cutting, drilling and machining are to be finished so that edges are smooth. Hand cutting by torch is unacceptable. Welds shall be ground and sanded to insure satisfactory appearance of the completed unit.

Paint: Manufacturer's standard color is acceptable provided it is a shade of yellow or orange associated with construction equipment. Contact the Asset Management Division, Equipment Section office at (804) 236-3589 for approval.

If manufacturer's standard color is not acceptable the unit is to be painted one coat of rust inhibitive paint prior to being painted a finished coat of lead free Virginia Highway Orange Color, Du Pont Color #LF74279AT, or equivalent.

Advertisement: No stickers, decals or plates displaying dealer or distributor name or logo shall be affixed to equipment. Manufacturer's plate with model and serial number is to be on the equipment.

Warranty: Supplier is to provide a statement of manufacturer's standard warranty of all items supplied. A minimum of 12 months from in-service date shall be provided.

12' One-Way Snowplow with Tapered Moldboard

Delivery: Equipment is to be delivered to the District Headquarters location listed in the Request for Quote (RFQ). Unit is to be fully assembled (except where noted in these specifications) and ready to operate before being accepted by the Department.

Current Model: To be standard proven model of manufacturer's latest current production with additional features outlined herein. Unit is not to be materially modified or augmented.

Bid Literature: Descriptive literature, including verification of unit weight, will be required to substantiate the details specified in bid. Detailed drawings showing all dimensions shall be furnished with bid.

Manuals and Parts Lists: Successful bidder shall furnish two sets of manual of instructions and two sets of microfiche, CD-ROM or printed parts lists with each unit. Microfiche parts lists to be 4" x 6" cards, positive or negative, 24X or 42X magnification.



VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

11' Snowplow - Dual Tapered Moldboard

General: Snowplow for 37,000 lb. GVW truck to be two-way reversing type, 11' minimum plowing width and weigh not less than 1,500 lbs.

The plow is to be constructed for high speed operations, reversible from 42 degrees right to 42 degrees left. Plow to have sufficient vertical play on ends of plow to fit shape of pavement. For convenience of operator, positioning mechanism for angular adjustment, including latch retainer, to be designed to operate from top side.

Moldboard: Moldboard to have cutting edge with standard punching. Moldboard to be constructed of 10 gauge steel. The height in center of plow to be approximately 40" or greater and the discharge ends to be approximately 50" or greater. Moldboard to be adequately braced with not less than five vertical ribs of ½" x 3", or equal. Bottom member or blade support to be heavy duty 3" x 4" x 5/8" angle or equal with necessary gussets to support and reinforce moldboard and cutting edge.

Blade: Plow to be equipped with sectional carbide tipped blades conforming to the attached specifications. Carbide blades are to be mounted to moldboard behind a one piece regular blade; thereby, providing double thickness blades. Blades to be punched with standard punching.

Automatic Moldboard Release: The moldboard is to release on shock and automatically spring back in place by use of enclosed springs. Springs to be adjustable in order to be able to regulate the trip.

Trip cylinder attachment to moldboard is to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Plow Frame: Plow frame to be heavy duty with side members of frame not less than ½" x 3" x 3" angle, box frame or channel of equal strength. Frame to be adequately braced. Shackles for attachment to push frame to have center to center measurement of 21" with 1-5/16" diameter holes for pins. Hole/pin position to be not less than 36" from plow frame pivot point. Radius angle to be fabricated of not less than 3" x 3" x ½" angle, attached to at least three points to a front angle of not less than 3" x 4" x ½" or 3-1/2" x 3-1/2" x ½" angle. Minimum hinge point centers to be 88". The hinge pins are to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

11' Snowplow - Dual Tapered Moldboard

Lift Chain: The lift chain to be of adequate length, not less than 3/8" size. Chain to be attached to plow at each end with a chain shackle. Chain shackle is to be either loose pin type with cotter pin or bolt pin type with cotter pin securing the nut. Screw pin type is not acceptable. Cold shuts will not be acceptable. Chain to include spring links for shock absorbing.

Moldboard Deflector: A piece of 9/32" thick x 12" wide x moldboard length, two-ply, rubberized, smooth face conveyor belting is to be furnished as a moldboard deflector. The top edge of the moldboard is to be drilled with 1/4" holes at each end and on 12" centers the full length for attachment. Corrosion resistant 1/4" bolts and large O.D. (fender) washers are to fasten belting to moldboard. **NOTE: BELTING AND BOLTS MAY BE SHIPPED SEPARATE FOR INSTALLATION BY VDOT PERSONNEL; HOWEVER, BOLTS MUST BE INDIVIDUALLY PACKAGED IN QUANTITIES CORRECT FOR EACH SNOWPLOW, AND BOTH BOLTS AND BELT ARE TO BE MARKED FOR THE SNOWPLOW SIZE.**

Jack: Plow is to have a screw type storage jack mounted centrally to shackles. It is to be capable of adjusting shackle height to match hitch height but not interfere with hookup. To have a base plate adequate for support. Jack is to be mounted to plow frame with a telescoping pipe and hitch pin arrangement so that it can be removed after plow is hitched to truck.

Push Frame: No "A" frame or hydraulic lift to be furnished.

This plow is to work with standard "A" frame and hydraulic lift device now owned by the Virginia Department of Transportation.

Skids/Casters: No supporting device is to be furnished, such as the skid shoes with swivel adjustments or skid supports.

Workmanship: All workmanship shall be in accordance with good commercial practices. All cutting, drilling and machining are to be finished so that edges are smooth. Hand cutting by torch is unacceptable. Welds shall be ground and sanded to insure satisfactory appearance of the completed unit.

Paint: Manufacturer's standard color is acceptable provided it is a shade of yellow or orange associated with construction equipment. Contact the Asset Management Division, Equipment Section office at (804) 236-3589 for approval.

If manufacturer's standard color is not acceptable the unit is to be painted one coat of rust inhibitive paint prior to being painted a finished coat of lead free Virginia Highway Orange Color, Du Pont Color #LF74279AT, or equivalent.

Advertisement: No stickers, decals or plates displaying dealer or distributor name or logo shall be affixed to equipment. Manufacturer's plate with model and serial number is to be on the equipment.

Warranty: Supplier is to provide a statement of manufacturer's standard warranty of all items supplied. A minimum of 12 months from in-service date shall be provided.

Delivery: Equipment is to be delivered to the District Headquarters location listed in the Request for Quote (RFQ). Unit is to be fully assembled (except where noted in these specifications) and ready to operate before being accepted by the Department.

Current Model: To be standard proven model of manufacturer's latest current production with additional features outlined herein. Unit not to be materially modified or augmented.

Bid Literature: Descriptive literature, including verification of unit weight, will be required to substantiate the details specified in bid. Detailed drawings showing all dimensions shall be furnished with bid.

Manuals and Parts Lists: Successful bidder shall furnish two sets of manual of instructions and two sets of microfiche, CD-ROM or printed parts lists with each unit. Microfiche parts lists to be 4" x 6" cards, positive or negative, 24X or 42X magnification.



VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

11' Snowplow - Power Reversing with Dual Tapered Moldboard

General: Snowplow for 37,000 lb. GVW truck to be two-way power reversing type, 11' minimum plowing width and weigh not less than 1,500 lbs.

The plow is to be constructed for high speed operations, reversible from 42 degrees right to 42 degrees left. Plow to have sufficient vertical play on ends of plow to fit shape of pavement.

Moldboard: Moldboard to have cutting edge with standard punching. Moldboard to be constructed of 10 gauge steel. The height in center of plow to be approximately 40" or greater and the discharge ends to be approximately 50" or greater. Moldboard to be adequately braced with not less than five vertical ribs of ½" x 3", or equal. Bottom member or blade support to be heavy duty 3" x 4" x 5/8" angle or equal with necessary gussets to support and reinforce moldboard and cutting edge.

Blade: Plow to be equipped with sectional carbide tipped blades conforming to the attached specifications. Carbide blades are to be mounted to moldboard behind a one piece regular blade; thereby, providing double thickness blades. Blades to be punched with standard punching.

Automatic Moldboard Release: The moldboard is to release on shock and automatically spring back in place by use of enclosed springs. Springs to be adjustable in order to be able to regulate the trip.

Trip cylinder attachment to moldboard is to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Plow Frame: Plow frame to be heavy duty with side members of frame not less than ½" x 3" x 3" angle, box frame or channel of equal strength. Frame to be adequately braced. Shackles for attachment to push frame to have center to center measurement of 21" with 1-5/16" diameter holes for pins. Hole/pin position to be not less than 36" from plow frame pivot point. Radius angle to be fabricated of not less than 3" x 3" x ½" angle, attached to at least three points to a front angle of not less than 3" x 4" x ½" or 3-1/2" x 3-1/2" x ½" angle. Minimum hinge point centers to be 88". The hinge pins are to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Power Reversing: The hydraulic power reversing system may be either by cylinders or hydraulic motor.

11' Snowplow - Power Reversing with Dual Tapered Moldboard

If by cylinders, system is to consist of two - 2-1/2" single-acting cylinders. Stroke is to be adequate for 42 degrees right to 42 degrees left positions. A latching system latched mechanically and released by cylinder activation is to be included. A floating design shall be used on the pins attaching the cylinders to semi-circle and framework, utilizing top and bottom cotter pins or other methods to reduce the risk of losing a pin. Cylinders, brackets, etc., are to be furnished and installed complete for hydraulic connection by State.

If hydraulic motor furnished, plow reversing to be by worm gear. Plow angles shall lock automatically at any angle.

Hoses to power reversing cylinders or motor are to extend beyond shackle attachment point at least 30". Hose to terminate with 1/2" N.P.T. male pipe thread.

Lift Chain: The lift chain to be of adequate length, not less than 3/8" size. Chain to be attached to plow at each end with a chain shackle. Chain shackle is to be either loose pin type with cotter pin or bolt pin type with cotter pin securing the nut. Screw pin type is not acceptable. Cold shuts will not be acceptable. Chain to include spring links for shock absorbing.

Moldboard Deflector: A piece of 9/32" thick x 12" wide x moldboard length, two-ply, rubberized, smooth face conveyor belting is to be furnished as a moldboard deflector. The top edge of the moldboard is to be drilled with 1/4" holes at each end and on 12" centers the full length for attachment. Corrosion resistant 1/4" bolts and large O.D. (fender) washers are to fasten belting to moldboard. **NOTE: BELTING AND BOLTS MAY BE SHIPPED SEPARATE FOR INSTALLATION BY VDOT PERSONNEL; HOWEVER, BOLTS MUST BE INDIVIDUALLY PACKAGED IN QUANTITIES CORRECT FOR EACH SNOWPLOW, AND BOTH BOLTS AND BELT ARE TO BE MARKED FOR THE SNOWPLOW SIZE.**

Jack: Plow is to have a screw type storage jack mounted centrally to shackles. It is to be capable of adjusting shackle height to match hitch height but not interfere with hookup. To have a base plate adequate for support. Jack is to be mounted to plow frame with a telescoping pipe and hitch pin arrangement so that it can be removed after plow is hitched to truck.

Push Frame: No "A" frame or hydraulic lift to be furnished.

This plow is to work with standard "A" frame and hydraulic lift device now owned by the Virginia Department of Transportation.

Skids/Casters: No supporting device is to be furnished, such as the skid shoes with swivel adjustments or skid supports.

Workmanship: All workmanship shall be in accordance with good commercial practices. All cutting, drilling and machining are to be finished so that edges are smooth. Hand cutting by

11' Snowplow - Power Reversing with Dual Tapered Moldboard

torch is unacceptable. Welds shall be ground and sanded to insure satisfactory appearance of the completed unit.

Paint: Manufacturer's standard color is acceptable provided it is a shade of yellow or orange associated with construction equipment. Contact the Asset Management Division, Equipment Section office at (804) 236-3589 for approval.

If manufacturer's standard color is not acceptable the unit is to be painted one coat of rust inhibitive paint prior to being painted a finished coat of lead free Virginia Highway Orange Color, Du Pont Color #LF74279AT, or equivalent.

Advertisement: No stickers, decals or plates displaying dealer or distributor name or logo shall be affixed to equipment. Manufacturer's plate with model and serial number is to be on the equipment.

Warranty: Supplier is to provide a statement of manufacturer's standard warranty of all items supplied. A minimum of 12 months from in-service date shall be provided.

Delivery: Equipment is to be delivered to the District Headquarters location listed in the Request for Quote (RFQ). Unit is to be fully assembled (except where noted in these specifications) and ready to operate before being accepted by the Department.

Current Model: To be standard proven model of manufacturer's latest current production with additional features outlined herein. Unit not to be materially modified or augmented.

Bid Literature: Descriptive literature, including verification of unit weight, will be required to substantiate the details specified in bid. Detailed drawings showing all dimensions shall be furnished with bid.

Manuals and Parts Lists: Successful bidder shall furnish two sets of manual of instructions and two sets of microfiche, CD-ROM or printed parts lists with each unit. Microfiche parts lists to be 4" x 6" cards, positive or negative, 24X or 42X magnification.



VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

12' Snowplow - Dual Tapered Moldboard

General: Snowplow for 37,000 lb. GVW truck to be two-way reversing type, 12' minimum plowing width and weigh not less than 1,700 lbs.

The plow is to be constructed for high speed operations, reversible from 42 degrees right to 42 degrees left. Plow to have sufficient vertical play on ends of plow to fit shape of pavement. For convenience of operator, positioning mechanism for angular adjustment, including latch retainer, to be designed to operate from top side.

Moldboard: Moldboard to have cutting edge with standard punching. Moldboard to be constructed of 10 gauge steel. The height in center of plow to be approximately 40" or greater and the discharge ends to be approximately 54" or greater. Moldboard to be adequately braced with not less than five vertical ribs of ½" x 3", or equal. Bottom member or blade support to be heavy duty 3" x 4" x 5/8" angle or equal with necessary gussets to support and reinforce moldboard and cutting edge.

Blade: Plow to be equipped with sectional carbide tipped blades conforming to the attached specifications. Carbide blades are to be mounted to moldboard behind a one piece regular blade; thereby, providing double thickness blades. Blades to be punched with standard punching.

Automatic Moldboard Release: The moldboard is to release on shock and automatically spring back in place by use of enclosed springs. Springs to be adjustable in order to be able to regulate the trip.

Trip cylinder attachment to moldboard is to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Plow Frame: Plow frame to be heavy duty with side members of frame not less than ½" x 3" x 3" angle, box frame or channel of equal strength. Frame to be adequately braced. Shackles for attachment to push frame to have center to center measurement of 21" with 1-5/16" diameter holes for pins. Hole/pin position to be not less than 36" from plow frame pivot point. Radius angle to be fabricated of not less than 3" x 3" x ½" angle, attached to at least three points to a front angle of not less than 3" x 4" x ½" or 3-1/2" x 3-1/2" x ½" angle. Minimum hinge point centers to be 88". The hinge pins are to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Lift Chain: The lift chain to be of adequate length, not less than 3/8" size. Chain to be attached to plow at each end with a chain shackle. Chain shackle is to be either loose pin type with cotter pin or bolt pin type with cotter pin securing the nut. Screw pin type is not acceptable. Cold shuts will not be acceptable. Chain to include spring links for shock absorbing.

Moldboard Deflector: A piece of 9/32" thick x 12" wide x moldboard length, two-ply, rubberized, smooth face conveyor belting is to be furnished as a moldboard deflector. The top edge of the moldboard is to be drilled with 1/4" holes at each end and on 12" centers the full length for attachment. Corrosion resistant 1/4" bolts and large O.D. (fender) washers are to fasten belting to moldboard. **NOTE: BELTING AND BOLTS MAY BE SHIPPED SEPARATE FOR INSTALLATION BY VDOT PERSONNEL; HOWEVER, BOLTS MUST BE INDIVIDUALLY PACKAGED IN QUANTITIES CORRECT FOR EACH SNOWPLOW, AND BOTH BOLTS AND BELT ARE TO BE MARKED FOR THE SNOWPLOW SIZE.**

Jack: Plow is to have a screw type storage jack mounted centrally to shackles. It is to be capable of adjusting shackle height to match hitch height but not interfere with hookup. To have a base plate adequate for support. Jack is to be mounted to plow frame with a telescoping pipe and hitch pin arrangement so that it can be removed after plow is hitched to truck.

Push Frame: No "A" frame or hydraulic lift to be furnished.

This plow is to work with standard "A" frame and hydraulic lift device now owned by the Virginia Department of Transportation.

Skids/Casters: No supporting device is to be furnished, such as the skid shoes with swivel adjustments or skid supports.

Workmanship: All workmanship shall be in accordance with good commercial practices. All cutting, drilling and machining are to be finished so that edges are smooth. Hand cutting by torch is unacceptable. Welds shall be ground and sanded to insure satisfactory appearance of the completed unit.

Paint: Manufacturer's standard color is acceptable provided it is a shade of yellow or orange associated with construction equipment. Contact the Asset Management Division, Equipment Section office at (804) 236-3589 for approval.

If manufacturer's standard color is not acceptable the unit is to be painted one coat of rust inhibitive paint prior to being painted a finished coat of lead free Virginia Highway Orange Color, Du Pont Color #LF74279AT, or equivalent.

Advertisement: No stickers, decals or plates displaying dealer or distributor name or logo shall be affixed to equipment. Manufacturer's plate with model and serial number is to be on the equipment.

Warranty: Supplier is to provide a statement of manufacturer's standard warranty of all items supplied. A minimum of 12 months from in-service date shall be provided.

Delivery: Equipment is to be delivered to the District Headquarters location listed in the Request for Quote (RFQ). Unit is to be fully assembled (except where noted in these specifications) and ready to operate before being accepted by the Department.

Current Model: To be standard proven model of manufacturer's latest current production with additional features outlined herein. Unit not to be materially modified or augmented.

Bid Literature: Descriptive literature, including verification of unit weight, will be required to substantiate the details specified in bid. Detailed drawings showing all dimensions shall be furnished with bid.

Manuals and Parts Lists: Successful bidder shall furnish two sets of manual of instructions and two sets of microfiche, CD-ROM or printed parts lists with each unit. Microfiche parts lists to be 4" x 6" cards, positive or negative, 24X or 42X magnification.



VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

12' Snowplow - Power Reversing with Dual Tapered Moldboard

General: Snowplow for 37,000 lb. GVW truck to be two-way power reversing type, 12' minimum plowing width and weigh not less than 1,700 lbs.

The plow is to be constructed for high speed operations, reversible from 42 degrees right to 42 degrees left. Plow to have sufficient vertical play on ends of plow to fit shape of pavement.

Moldboard: Moldboard to have cutting edge with standard punching. Moldboard to be constructed of 10 gauge steel. The height in center of plow to be approximately 40" or greater and the discharge ends to be approximately 54" or greater. Moldboard to be adequately braced with not less than five vertical ribs of ½" x 3", or equal. Bottom member or blade support to be heavy duty 3" x 4" x 5/8" angle or equal with necessary gussets to support and reinforce moldboard and cutting edge.

Blade: Plow to be equipped with sectional carbide tipped blades conforming to the attached specifications. Carbide blades are to be mounted to moldboard behind a one piece regular blade; thereby, providing double thickness blades. Blades to be punched with standard punching.

Automatic Moldboard Release: The moldboard is to release on shock and automatically spring back in place by use of enclosed springs. Springs to be adjustable in order to be able to regulate the trip.

Trip cylinder attachment to moldboard is to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Plow Frame: Plow frame to be heavy duty with side members of frame not less than ½" x 3" x 3" angle, box frame or channel of equal strength. Frame to be adequately braced. Shackles for attachment to push frame to have center to center measurement of 21" with 1-5/16" diameter holes for pins. Hole/pin position to be not less than 36" from plow frame pivot point. Radius angle to be fabricated of not less than 3" x 3" x ½" angle, attached to at least three points to a front angle of not less than 3" x 4" x ½" or 3-1/2" x 3-1/2" x ½" angle. Minimum hinge point centers to be 88". The hinge pins are to be either of the following methods; a bolt drilled and having a cotter pin to secure the nut, or a steel floating clevis pin with a flat washer and cotter pin securing it.

Power Reversing: The hydraulic power reversing system may be either by cylinders or hydraulic motor.

12' Snowplow - Power Reversing with Dual Tapered Moldboard

If by cylinders, system is to consist of two - 2-1/2" single-acting cylinders. Stroke is to be adequate for 42 degrees right to 42 degrees left positions. A latching system latched mechanically and released by cylinder activation is to be included. A floating design shall be used on the pins attaching the cylinders to semi-circle and framework, utilizing top and bottom cotter pins or other methods to reduce the risk of losing a pin. Cylinders, brackets, etc., are to be furnished and installed complete for hydraulic connection by State.

If hydraulic motor furnished, plow reversing to be by worm gear. Plow angles shall lock automatically at any angle.

Hoses to power reversing cylinders or motor are to extend beyond shackle attachment point at least 30". Hose to terminate with 1/2" N.P.T. male pipe thread.

Lift Chain: The lift chain to be of adequate length, not less than 3/8" size. Chain to be attached to plow at each end with a chain shackle. Chain shackle is to be either loose pin type with cotter pin or bolt pin type with cotter pin securing the nut. Screw pin type is not acceptable. Cold shuts will not be acceptable. Chain to include spring links for shock absorbing.

Moldboard Deflector: A piece of 9/32" thick x 12" wide x moldboard length, two-ply, rubberized, smooth face conveyor belting is to be furnished as a moldboard deflector. The top edge of the moldboard is to be drilled with 1/4" holes at each end and on 12" centers the full length for attachment. Corrosion resistant 1/4" bolts and large O.D. (fender) washers are to fasten belting to moldboard. **NOTE: BELTING AND BOLTS MAY BE SHIPPED SEPARATE FOR INSTALLATION BY VDOT PERSONNEL; HOWEVER, BOLTS MUST BE INDIVIDUALLY PACKAGED IN QUANTITIES CORRECT FOR EACH SNOWPLOW, AND BOTH BOLTS AND BELT ARE TO BE MARKED FOR THE SNOWPLOW SIZE.**

Jack: Plow is to have a screw type storage jack mounted centrally to shackles. It is to be capable of adjusting shackle height to match hitch height but not interfere with hookup. To have a base plate adequate for support. Jack is to be mounted to plow frame with a telescoping pipe and hitch pin arrangement so that it can be removed after plow is hitched to truck.

Push Frame: No "A" frame or hydraulic lift to be furnished.

This plow is to work with standard "A" frame and hydraulic lift device now owned by the Virginia Department of Transportation.

Skids/Casters: No supporting device is to be furnished, such as the skid shoes with swivel adjustments or skid supports.

Workmanship: All workmanship shall be in accordance with good commercial practices. All cutting, drilling and machining are to be finished so that edges are smooth. Hand cutting by

12' Snowplow - Power Reversing with Dual Tapered Moldboard

torch is unacceptable. Welds shall be ground and sanded to insure satisfactory appearance of the completed unit.

Paint: Manufacturer's standard color is acceptable provided it is a shade of yellow or orange associated with construction equipment. Contact the Asset Management Division, Equipment Section office at (804) 236-3589 for approval.

If manufacturer's standard color is not acceptable the unit is to be painted one coat of rust inhibitive paint prior to being painted a finished coat of lead free Virginia Highway Orange Color, Du Pont Color #LF74279AT, or equivalent.

Advertisement: No stickers, decals or plates displaying dealer or distributor name or logo shall be affixed to equipment. Manufacturer's plate with model and serial number is to be on the equipment.

Warranty: Supplier is to provide a statement of manufacturer's standard warranty of all items supplied. A minimum of 12 months from in-service date shall be provided.

Delivery: Equipment is to be delivered to the District Headquarters location listed in the Request for Quote (RFQ). Unit is to be fully assembled (except where noted in these specifications) and ready to operate before being accepted by the Department.

Current Model: To be standard proven model of manufacturer's latest current production with additional features outlined herein. Unit not to be materially modified or augmented.

Bid Literature: Descriptive literature, including verification of unit weight, will be required to substantiate the details specified in bid. Detailed drawings showing all dimensions shall be furnished with bid.

Manuals and Parts Lists: Successful bidder shall furnish two sets of manual of instructions and two sets of microfiche, CD-ROM or printed parts lists with each unit. Microfiche parts lists to be 4" x 6" cards, positive or negative, 24X or 42X magnification.